

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for alkaline cleaning of aluminum or aluminum alloy, characterized in that an alkaline cleaning liquid is prepared by mixing into deionized water or water which contains one or more metallic ions selected from Ca, Mg, Mn, Fe, Zn and Cu, the following ingredients (A)-(D) ~~An aluminum or aluminum alloy cleaning alkaline liquid, which is characterized by containing in water:~~

- (A) from 0.2 to 10 g/L of one or more of organic phosphonic acid and its salt salts,
- (B) from 0.001 to 2 g/L of one or more metallic ions selected from Ca, Mg, Mn, Fe, Zn and Cu in terms of a total concentration contained in said alkaline cleaning liquid ~~metallic ions having from 5.0 to 14.0 of stability constant with the organic phosphonic acid and its salt, and wherein the metallic ions include metallic ions which are present in the water used in said aluminum or aluminum alloy cleaning alkaline liquid and metallic ions which dissolve from an aluminum or aluminum alloy when cleaned by said aluminum or aluminum alloy cleaning liquid,~~
- (C) from 0.5 to 40 g/L in total of one or more alkali builders selected from alkali metal hydroxide, alkali metal carbonate, inorganic alkali metal phosphate and alkali metal silicate, and
- (D) from 0.1 to 10 g/L of surfactant,

and is further characterized in that said alkaline cleaning liquid is brought into contact with the aluminum or aluminum alloy at a temperature of from 30° to 70°C for 2 to 120 seconds, while maintaining a weight ratio of said organic phosphonic acid and its salts to one or more of metallic ions contained in the alkaline cleaning liquid selected from Ca, Mg, Mn, Fe, Zn and Cu within a range of from 100 : 0.05 to 20 and subsequently rinsing with water wherein a weight ratio (A):(B) lies within a range of 100:0.05 to 20, thereby having stable etching uniformity in continuous production.

2. (Canceled)

3. (Currently Amended) The method ~~An aluminum or aluminum alloy cleaning alkaline liquid~~ according to claim 1, characterized in that the alkaline cleaning liquid further contains from 0.1 to 10.0 g/L of one or more chelating agents, selected from gluconic acid, heptogluconic acid, glycolic acid, oxalic acid, citric acid, tartaric acid, malonic acid, formic acid, glutaric acid, propyonic acid, succinic acid, malic acid, lactic acid, acetic acid, and benzoic acid.

4. (Canceled)

5. (Currently Amended) The method ~~An aluminum or aluminum alloy cleaning alkaline liquid~~ according to claim 1, characterized in that 60% or more of said alkali metal hydroxide and alkali metal carbonate in terms of alkali metal mole ratio is potassium.

6. (Currently Amended) The method ~~An aluminum- or aluminum-alloy-cleaning alkaline liquid~~ according to claim 1, wherein a pH of said alkaline cleaning liquid is in the range of from 9.0 to 13.0.

7. (Canceled)

8. (New) The method according to claim 1, wherein said one or more metallic ions include 0.01 g/L or more of Ca.

9. (New) The method according to claim 1, wherein said one or more metallic ions include 0.003 g/L or more of Fe.

10. (New) The method according to claim 1, wherein said one or more metallic ions include 0.01 g/L or more of Mg.

11. (New) The method according to claim 1, wherein said one or more metallic ions include 0.005 g/L or more of Mn.